

H01M10/48

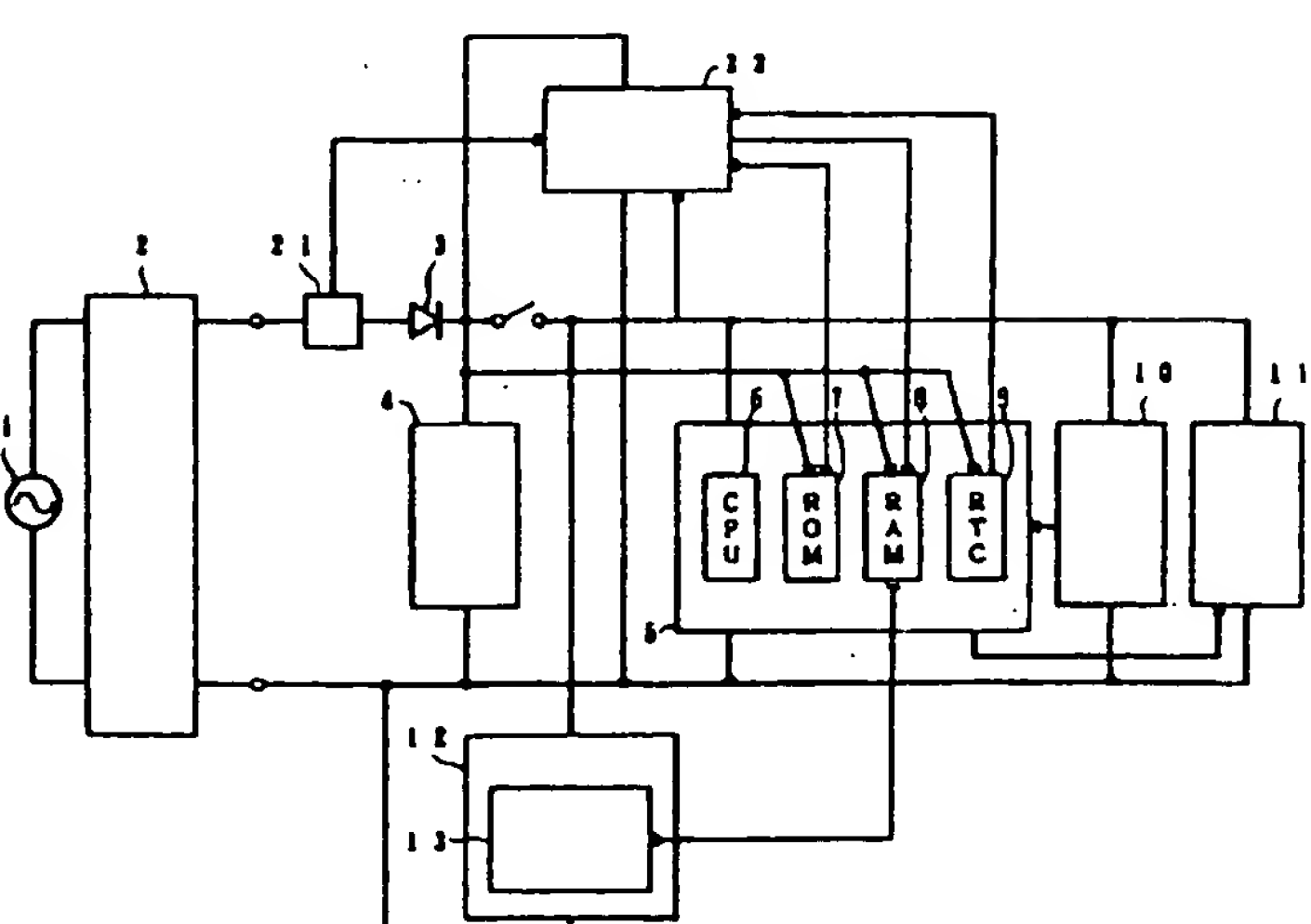
145 E 1601

(54) SECONDARY BATTERY CHARGED STATE MONITORING SYSTEM IN ELECTRONIC APPARATUS

- (11) 6-163083 (A) (43) 10.6.1994 (19) JP  
 (21) Appl. No. 4-306887 (22) 17.11.1992  
 (71) SHARP CORP (72) HIROYASU UENO  
 (51) Int. Cl<sup>5</sup>. H01M10/48

PURPOSE: To precisely grasp the charged state of a secondary battery by software even in the state where a power source is cut.

CONSTITUTION: A charging connection detecting circuit 21 is provided between a charging device 2 and a secondary battery 4, and a charging state monitoring arithmetic circuit 22 for receiving power supply from the secondary battery 4 is provided. The charging state monitoring arithmetic circuit 22 counts the clock from the real time clock 9 of a microcomputer part 5 when the charging connection detecting circuit 21 is laid in the detecting state, and stores the charging time  $t_c$  in a timer counter TC<sub>c</sub> in the RAM 8 of the microcomputer part 5. At power source input, the present charge residual capacity  $Q_0$  is calculated from the charge residual quantity  $Q_c$  at power source cut, the charge time  $t_c$  and the charged current value  $I_c$  by use of an application program 13, and displayed on a display device 11.



2: charging device, 10: input device, 12: auxiliary memory device

(54) MEASURING METHOD FOR RESIDUAL LIFE OF ELECTRIC MOTOR CAR

- (11) 6-163084 (A) (43) 10.6.1994 (19) JP  
 (21) Appl. No. 4-285185 (22) 29.9.1992  
 (71) YUASA CORP(2) (72) MASAMICHI INAKURA(3)  
 (51) Int. Cl<sup>5</sup>. H01M10/48, B60L3/00, G01R31/36

PURPOSE: To provide a method for measuring the residual life of a storage battery for electric motor car in which quantitative and objective residual life

